

AMENDMENTS TO THE SPECIFICATION:

Please replace the Abstract with a new Abstract as set forth on the following page:

ABSTRACT

A Raman amplifier system, including an optical wave guide having a crystalline material for guiding an optical signal having a first wavelength, the crystalline material having a Raman wavelength shift, and a pump configured to pump light into the optical wave guide, the pump light having a second wavelength being substantially equal to the first wavelength minus the Raman wavelength shift.